

Claims

1. An age-resistant, optionally halogen-free, polyolefin wrapping foil, comprising at least 4 phr of a primary antioxidant or at least 0.3 phr of a combination of primary and secondary antioxidants, the primary and secondary antioxidant function optionally being present in different molecules or to be united in one molecule.
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2. The wrapping foil of claim 1, wherein the amount of secondary antioxidant is at least 0.5 phr.
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3. The wrapping foil of claim 1 which comprises a combination of sterically hindered phenols having a molecular weight of more than 500 g/mol with a phosphitic secondary antioxidant.
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4. The wrapping foil of claim 1, which comprises a combination of a low-volatility primary phenolic antioxidant and in each case a secondary antioxidant from the classes of the sulfur compounds and the phosphites, it being possible for the phenolic, the sulfur-containing, and the phosphitic functions to be united in any desired number in one molecule.
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5. The wrapping foil of claim 1, which comprises a combination of CAS 6683-19-8, CAS 31570-04-4, and at least one thiopropionic ester, two or more thiopropionic esters and/or at least one metal deactivator.
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6. The wrapping foil of claim 1, comprising a polypropylene copolymer and also ethylene-propylene copolymers from the classes of the EPM and EPDM.
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7. The wrapping foil of claim 1, which has a thermal stability of at least 105°C, and exhibits a breaking elongation of at least 100% after 20 days' storage at 136°C, a compatibility, on storage on a cable with polyolefin insulation, of at least 105°C after 3000 hours,
35 a compatibility, on storage on a cable with polyolefin insulation, of 125°C after 2000 hours, and/or a heat resistance of 170°C (30 min).
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8. The wrapping foil of claim 1, which has on one or both sides a layer of adhesive, , and optionally a primer layer between foil and adhesive layer, the amount of the adhesive layer being in each case 10 to 40 g/m², and the adhesive exhibiting
5 a bond strength to steel of 1.5 to 3 N/cm, an unwind force of 1.2 to 6.0 N/cm at 300 mm/min unwind speed, , and/or a holding power of more than 150 min.
- 10 9. The wrapping foil of claim 1, which comprises a solvent-free pressure-sensitive adhesive which is produced by coextrusion, melt coating or dispersion coating, this adhesive being joined to a surface of the carrier film by means of flame or corona pretreatment or of an adhesion promoter layer which is applied by coextrusion or coating.
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10. The wrapping foil of claim 1, which comprises at least one polyolefin having a flexural modulus of less than 900 MPa, , and/or a crystallite melting point of between 120°C and 166°C.,
- 20 11. The wrapping foil of claim 1, wherein a flame-retardant filler is added at 70 to 200 phr,
12. The wrapping foil of claim 1, which comprises a fraction of carbon black of at least 5 phr, the carbon black optionally having a pH of 6 to 8.
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13. The wrapping foil of claim 1, which comprises an oxygen-containing polymer in a blend with the polypropylene copolymer, so that a fraction of oxygen is between 0.7 and 10 phr, an oxygen-containing polymer in at least one coextrusion layer besides a layer of polypropylene copolymer or an ethylene copolymer having a density of 0.86
30 to 0.92 g/cm³.
14. The wrapping foil of claim 1, which is plasticizer-free or has a plasticizer content so low that the fogging number is above 90%.
- 35 15. A process for producing a wrapping foil of claim 1, comprising compounding a compoun in a kneader or extruder in such a way that the wrapping

foil manufactured from the compound achieves a breakdown voltage of at least 3 kV/100 µm,

adding a flame-retardant filler not all at once when producing the compound, but instead in at least two portions, and/or

5 supplying the compound as a melt without an intermediate stage in solid form to an operation of foil production by extrusion or calendering.

16. A process for producing a wrapping foil of claim 1, comprising calender processing, in which case a melt index of the polypropylene copolymer is below 5 g/10 min,

10 and/or

extrusion processing, in which case the melt index of the polypropylene copolymer is between 1 and 20 g/10 min.

17. A process for producing a wrapping foil of claim 1, comprising

15 ◦ the wrapping foil to logs, which then, to increase the unwind force, are heat-treated and subsequently slit into rolls, the unwind force of the material thus produced at 300 mm/min being higher than without such a measure,

20 ◦ the wrapping foil, for the purpose of increasing the unwind force, to a flame or corona treatment or is provided with a polar coextrusion layer and is subsequently processed into rolls, the unwind force of the material thus produced at 300 mm/min being higher than without such a measure,

25 ◦ the wrapping foil is slit by a process which leads, as a result of rough slit edges, to easier hand tearability, the breaking elongation of the winding-film rolls thus slit being lower than in the case of slitting with sharp blades,

30 ◦ the wrapping foil is slit by a process which leads, as a result of rough slit edges, to easier hand tearability, the breaking elongation of the wrapping-foil rolls thus slit being in the range from 200 to 500%,

◦ the wrapping foil is slit on an automatic slitter with defined knife advancement speed, and/or

35 ◦ the wrapping foil is wound on a core with an inside diameter of 30 to 40 mm.

18. A method of bundling, protecting, labeling, insulating or sealing ventilation pipes or wires or cables and for sheathing cable harnesses in vehicles or field coils for picture tubes comprising wrapping said pipes, wires or cables with a wrapping foil according to claim 1.

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